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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,850	03/24/2004	Victor A. Bennett	CALP-006/00US/307826-2008	5467

58249 7590 08/21/2007
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EXAMINER

LEWIS, ALICIA M

ART UNIT	PAPER NUMBER
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2164

MAIL DATE	DELIVERY MODE
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08/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/807,850

Applicant(s)

BENNETT ET AL.

Examiner

Alicia M. Lewis

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.


SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action is responsive to communication filed June 4, 2007, in which claims 1-9 were elected for examination. Therefore, claims 1-9 are pending in this application.

Claim Objections

Claim 9 is objected to because of the following informalities: the word "processes" should be "process". Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. With respect to claim 1, the phrase "operable to" in lines 2, 5 and 7 of the claim renders the claim indefinite. It is unclear as to what the intended metes and bounds of the claim are, since the claim appears to cover anything and everything that does not prohibit actions from occurring. Claims 2-9 are rejected as being dependent upon claim 1.
4. Claim 4 recites the limitation "the differential bits" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

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5. Claim 5 recites the limitation "the differential bit" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. Claim 1 does not recite any code or steps for causing the engines to do anything, but instead just includes engines that are "operable to" perform the suggested functions. The claim language simply ensures that there are no steps or code that prohibit the suggested actions from occurring. Therefore, the invention of claim 1 lacks patentable utility.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan et al. (US Patent 5,414,809) ('Hogan') in view of Storr (US Patent 7,072,302 B1).

With respect to claim 1, Hogan teaches a graph engine for manipulation data in a database comprising (column 1 lines 34-46):

a context engine operable to read information from one or more cells (column 23 line 53 – column 24 line 37);

a read engine operable to read data from the database by matching arguments against entries in the database and returning results from the database (column 23 line 53 – column 24 line 37); and

a write engine operable to write data into the database by creating an entry in the database and writing data to that entry in the database (column 31 lines 29-38).

Hogan does not teach each of the one or more cells including a header and a payload, the header of each of the one or more cells instructing the graph engine how to process the cell.

Storr teaches data cell traffic management (see abstract), in which he teaches each of the one or more cells including a header and a payload, the header of each of the one or more cells instructing the graph engine how to process the cell (column 4 lines 5-10).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hogan by the teaching of Storr because wherein each of the one or more cells including a header and a payload, the header of each of the one or more cells instructing the graph engine how to process the cell would enable the controlling of data cell transmission in a network (Storr, column 1 lines 51-52).

With respect to claim 2, Hogan as modified teaches wherein the information in the database is represented in memory in the form of graphs, the graphs being formed by one or more sub-trees (Hogan, abstract, column 1 lines 5-10, column 4 lines 16-21 and lines 52-53).

9. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan et al. (US Patent 5,414,809) ('Hogan') in view of Storr (US Patent 7,072,302 B1) as applied to claims 1 and 2 above, and further in view of Henderson et al. (US Patent 6,362,993 B1) ('Henderson').

With respect to claim 3, Hogan as modified teaches claim 2 and wherein the one or more sub-trees includes profile data and results (column 4 lines 16-21 and lines 52-53, column 13 lines 22-35, column 25 lines 35-49, column 38 lines 14-19, column 69 line 65 – column 70 line 2).

Hogan as modified does not teach wherein the one or more sub-trees includes differential bit matching.

Henderson teaches a content addressable memory device (see abstract), in which he teaches differential bit matching (column 6 line 60 – column 7 line 24).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hogan by the teaching of Henderson because differential bit matching would enable a content addressable memory cell

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architecture to be used for improved matching (Henderson, column 3 lines 24-55) for fast database searches (column 16 line 60 – column 17 line 13).

With respect to claim 4, Hogan as modified teaches wherein the read engine operates by reading data from a location in memory and compares the contents of the memory location with a search object, the read engine using differential bits between the contents of the memory location and the search object to locate subsequent memory locations in the database (Hogan, column 23 line 53 – column 24 line 37; Henderson, column 6 line 60 – column 7 line 24, column 18 lines 14-26, and column 16 line 60 – column 17 line 13).

With respect to claim 5, Hogan as modified teaches wherein the write engine operates by identifying the first differential bit between the contents of a memory location in the database and a search object, and wherein the write engine is further operable to create a new entry in the database by writing information beginning at the location of the first differential bit (Hogan, column 31 lines 29-38; Henderson, column 2 lines 9-33, column 5 lines 36-53, column 15 lines 14-28 and lines 52-62).

10. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan et al. (US Patent 5,414,809) ('Hogan') in view of Storr (US Patent 7,072,302 B1) as applied to claims 1 and 2 above, and further in view of Upton (US Patent 7,080,092 B2).

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With respect to claim 6, Hogan as modified teaches claim 1.

Hogan as modified does not teach wherein the manipulating of data in the database is done using standardized database statements.

Upton teaches an application view component for system integration (see abstract) in which he teaches wherein the manipulating of data in the database is done using standardized database statements (column 5 lines 14-16).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hogan by the teaching of Upton because wherein the manipulating of data in the database is done using standardized database statements would enable applications (such as that of Hogan) the ability to have different views in an interface that allows manipulation of data in the database by non-programmers using underlying database statements without actually knowing the standardized statements (Upton, abstract).

With respect to claim 7, Hogan as modified teaches wherein the standardized database statements are structured query language statements (Upton, column 5 lines 14-16).

With respect to claim 8, Hogan as modified teaches wherein the standardized database statements are extensible markup language statements (Upton, column 27 lines 28-44, column 28 lines 13-29).

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan et al. (US Patent 5,414,809) ('Hogan') in view of Storr (US Patent 7,072,302 B1) as applied to claims 1 and 2 above, and further in view of Nakamura et al. (US Patent Application Publication 2006/0064449 A1) ('Nakamura').

With respect to claim 9, Hogan as modified teaches claim 1.

Hogan as modified does not teach wherein the graph engine is bale to process multiple cells representing multiple instructions by pipelining.

Nakamura teaches an operation apparatus and operation system (see abstract), in which he teaches wherein the graph engine is bale to process multiple cells representing multiple instructions by pipelining (paragraph 8).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hogan by the teaching Nakamura because wherein the graph engine is bale to process multiple cells representing multiple instructions by pipelining would enable high-speed processing (Nakamura, paragraph 8).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Lewis whose telephone number is 571-272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alicia Lewis
August 19, 2007


SAM RIMELL
PRIMARY EXAMINER